

### **REMARKS**

This is a response to the Final Office Communication mailed April 18, 2011 (Final Action). The two-month extended deadline to file a response is September 19, 2011 (September 18, 2011, being on a Sunday). Applicants also submit herewith a Request for Continued Examination (RCE) and the appropriate fee. The RCE is submitted to allow entry and consideration of the amendments provided herein. Applicants believe that the fees submitted herewith are sufficient. However, in the event that Applicants are incorrect, please charge any necessary fees to Deposit Account No. 23-2415, referencing Docket No. 38392-700.

By the above amendments, Claims 4, 7, 8 and 9 are amended to recite '*a composition comprising a crystal of human growth hormone (hGH), and polyarginine wherein said polyarginine is complexed with said crystal of hGH, and wherein said crystal of hGH comprises at least one cation and hGH...*' Support for the amendments can be found in the claims and specification as filed, for example: Examples 6-8, 10-12, 14, 18-22, 27, Fig. 19A-19B, 20A-20B, and Tables 12-13. Additionally, Claims 10, 19, 21, 63-68 and 72-76 and 80 are amended herein and Claims 85, 86 and 87 are new claims. Support for the amended and new claims can be found throughout the specification and original claims as filed. The amendments introduce no new matter, therefore entry of the amended claims is proper and respectfully requested.

### **Claim Objections**

Claims 4, 7-10, 17, 19-22, 63-68, 72-76, and 80 were objected to by the Examiner. Claims 4, 7-10, 19, 21, 63-68, 72-76 and 80 are amended herein. Applicants respectfully submit that the claim objections are obviated in view of the amendments. Applicants thus respectfully request favorable reconsideration and withdrawal of objections.

### **Claim Rejections - 35 U.S.C. §112**

Claims 7-10, 17, 19-22, 66-68, and 74-76 were rejected under 35 U.S.C. 112, second paragraph, as being allegedly indefinite. Applicants respectfully traverse this rejection.

Claims 7-9 are amended and no longer recite the term 'wherein the crystal is characterized by.' Accordingly, Applicants submit that the rejection is obviated in view of the claim amendments, and respectfully request favorable reconsideration and withdrawal of the rejection under 35 U.S.C. § 112.

Claims 9, 17, 19-22, 63, 68, 72, 76 and 80 were rejected under 35 U.S.C. 112, first paragraph, new matter, as allegedly failing to comply with the written description requirement.

Claim 9 is amended herein, and no longer recites the term 'or lower dose.' Accordingly, Applicants submit that the rejection is obviated in view of the claim amendments, and respectfully request favorable reconsideration and withdrawal of the rejection under 35 U.S.C. § 112.

Claims 4, 7-10, 17, 19-22, 63-68, 72-76, and 80 were rejected under 35 U.S.C. 112, first paragraph, for alleged lack of written description. Applicants respectfully traverse this rejection.

Amended claims 4, 7, 8, 9 and dependent claims are drawn to '*a composition comprising a crystal of human growth hormone (hGH), and polyarginine wherein said polyarginine is complexed with said crystal of hGH, and wherein said crystal of hGH comprises at least one cation and hGH...*' Applicants submit that this is supported by the written description. For example, at least Examples 6-8, 10-12, 14, and 20 are drawn to various crystals of hGH that comprise a cation and hGH. Examples 19, 21, 26 and 27 are drawn to complexing polyarginine with a crystal that comprises a cation such as calcium or sodium and hGH. Example 22 and Figs. 19A-19B demonstrate pharmacokinetics and pharmacodynamics of administration of the claimed compositions in rats. Additionally, para. [0105]-[0114] teach methods of arriving at compositions that comprise polyarginine and a crystal comprising a cation and human growth hormone (hGH) wherein said polyarginine is complexed with said crystal. Applicants respectfully request favorable reconsideration and withdrawal of the rejection under 35 U.S.C. § 112.

Claims 4, 7-10, 17, 19-22, 63-68, 72-76 and 80 were rejected under 35 U.S.C. 112, first paragraph, for alleged lack of enablement.

Applicants respectfully traverse this rejection. As described supra, amended claims 4, 7, 8, 9 and dependent claims are drawn to '*a composition comprising a crystal of human growth hormone (hGH), and polyarginine wherein said polyarginine is complexed with said crystal of hGH, and*

wherein said crystal of hGH comprises at least one cation and hGH...' The claims are fully enabled by the instant specification. For instance, Examples 6-8, 10, 12, 14, 20, and Fig. 3-7, 10-14, 18A-18B and para. [0105]-[0112] of the published application demonstrate methods of making crystals of hGH, wherein said crystals comprise a cation and hGH. Examples 19, 21, 26 and 27 and para. [0113]-[0114] of the published application demonstrate complexing polyarginine with crystals comprising hGH. Additionally, Example 21, and 26 provide methods and compositions that comprise polyarginine and a crystal comprising cations and human growth hormone (hGH) wherein said polyarginine is complexed with said crystal. Further, Examples 22-25 demonstrate administration of the claimed compositions in mammals, and pharmacodynamic and pharmacokinetic studies of the same. Based on this, Applicants submit that the claims are fully supported and enabled by the specification and original claims as filed.

Applicants thus respectfully request favorable reconsideration and withdrawal of the rejection under 35 U.S.C. § 112.

#### **Maintained-Claim Rejections - 35 U.S.C. §103**

Claims 4, 7-10, 17, 19-22, 63-68, 72-76 and 80 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Sorensen et al. (1998, US Patent 5,849,700 – cited previously) in view of Singh (US Patent 5,788,959, Aug. 4, 1998) and DeFelippis et al. (1998, J. Pharm. Sci., vol. 87, pages 170-176, as cited previously). The rejection is traversed for at least the following reasons:

MPEP § 2143.03 requires "consideration" of every claim feature in an obviousness determination. To render claims, the Office must do more than merely "consider" each and every claim feature. The asserted combination of Sorensen, Singh and DeFelippis must also teach or suggest each and every claim feature. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (emphasis added) (to establish prima facie obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art).

Amended claims 4, 7, 8, 9 and dependent claims are drawn to '*a composition comprising a crystal of human growth hormone (hGH), and polyarginine wherein said polyarginine is complexed with said crystal of hGH, and wherein said crystal of hGH comprises calcium and hGH...*'

Sorensen does not disclose or suggest each element of the present claims. For instance, Sorensen does not disclose or suggest any crystals comprising a cation and hGH. The deficiency of

Sorensen is not cured by Singh and DeFelippis. Applicants submit that Sorensen, Singh and DeFelippis individually, or in combination do not disclose any crystals comprising at least one cation and hGH. Further, the combination of Sorensen, Singh and DeFelippis does not disclose complexing polyarginine with crystals comprising at least one cation and hGH.

Accordingly, Applicants submit that Sorensen in view of Singh and DeFelippis does not render obvious the present claims. Applicants respectfully request that the rejection under 35 U.S.C. 103(a) be withdrawn.

**Double Patenting**

Claims 4, 7-10, 17, 19-22, 63-68, 72-76, and 80 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being allegedly unpatentable over claims 1, 27, and 30 of copending Application No. 12/519,720. Applicants request that the rejection be held in abeyance till allowable subject matter is indicated. Applicants may consider filing a terminal disclaimer at that time.

In view of the remarks and amendments submitted herein, Applicants believe that the Application is in condition for allowance and such action is earnestly solicited.

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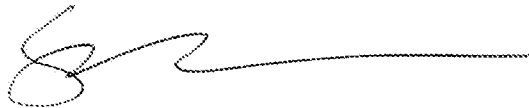
**P A T E N T**  
*WSGR Reference No. 38392-700*

**CONCLUSION**

Applicants submit that this paper fully addresses the rejections raised in the Final Office Action dated April 18, 2011. Should the Examiner have any questions, the Examiner is encouraged to contact the undersigned at (858) 350-2337. The Commissioner is authorized to charge any additional fees which may be required, for this or any future communication, including petition fees and extension of time fees, to Deposit Account No. 23-2415 (Docket No. 38392-700).

Respectfully submitted,

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